



DRAFT REPORT

**POTENTIAL ECONOMIC AND FISCAL IMPACTS OF  
SOUTH LAKE UNION DEVELOPMENT**

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## ***Introduction***

This report assesses potential benefits to the City of Seattle, and other public entities in Washington State, from the development that is underway and proposed for the South Lake Union area. The boundary of the area included in this study starts at the intersection of Interstate 5 and Denny Way, follows Denny Way to Aurora Avenue, Aurora to Galer St., Galer to Lake Union, around Lake Union to E. Nelson Pl., and E. Nelson to I-5. In 1994, this area was designated a Hub Urban Village in the City of Seattle's Comprehensive Plan.

The Neighborhood Plan for the area was completed in 1998. That plan focused on development of South Lake Union Park, traffic mitigation, and pedestrian improvements in the area. Subsequently, in response to growing development pressures, the City of Seattle commissioned a study of South Lake Union to evaluate the development potential within current zoning. In April, 2002, the consultant – Heartland – produced a report<sup>1</sup> estimating the development potential in the area. Much of the recent discussion about growth potential in South Lake Union has been based on those estimates, and they are the core assumptions for the financial projections in this report.

In the 2002 report, Heartland described a potential net increase of 7.2 million square feet of commercial space in the area from the baseline year 2000 to 2020, providing a potential of more than 23,000 new jobs. At the same time the report estimated that the number of dwelling units in the area could increase by 10,963 in the same period (this report uses 10,000). The consultants assumed that new and expanding biotech facilities would be the core of the new development, and estimated that 35% of the new square footage would be for that use.

Since the completion of that study in 2002, property owners have begun construction or announced projects in the South Lake Union area that total more than 3 million square feet of new development. Biotech is, in fact, a dominant use in that new development, suggesting that the original concept of developing a major biotech center in South Lake Union is feasible.

This report deals only with the financial consequences to the City of Seattle and Washington State public agencies from the redevelopment of the South Lake Union area. It is based on the projections generated in the 2002 Heartland study. Development to date suggests that those projections are likely to be realistic estimates. In addition, the report takes advantage of information about development underway in the region, projects that started or entered the planning process after the completion of the Heartland report.

The potential growth outlined in that study was adopted as a basis for creation of a model to estimate the economic impacts of the anticipated development, including changes in employment and output within the South Lake Union region as well as employment and

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<sup>1</sup> *Permit review and mobility pilot: South Lake Union*. Progress report by Heartland for City of Seattle Strategic Planning Office, April 2002.

development stimulated by the South Lake Union projects. The associated tax revenue to the City constitutes the economic benefit summarized in this report. The City and statewide revenue is estimated from 2005 to 2025 in current dollars and in net present value terms.

## ***Methodology***

### **Phase I and Phase II**

The revenues described below are estimates at this point, but the first phase of development is in the planning stages and major tenants are lined up for many of these projects. The benefits associated with this phase of development are reasonably predictable.

Given that, this report first estimates the potential City revenue from development now planned (**Phase I**), and then looks at the total revenue expected from the total potential development described in the Heartland report (**Phase II**). The Phase II development is assumed to occur evenly between 2008 and 2020. The financial benefits to the City of Seattle are based on the development in Phases I and II, followed by a five-year period (to 2025) of full occupancy, but no further growth.

### **Direct and Indirect Impacts**

This study includes both **direct impacts**, i.e., the current and projected development in the area and the likely increases in employment as these buildings come into service, and **indirect impacts**, i.e., the multiplier impact of the direct impacts resulting from the purchases of goods and services by the business occupants of the new buildings, as well as the purchases of goods and services by the workforce employed in the businesses occupying these new buildings. An input-output model of the state and local economy is used to estimate the indirect impacts.<sup>2</sup> Adding up direct and indirect impacts yields estimates of **total impacts**.

Use of the input-output model requires some additional key assumptions. First, in using this model, it is necessary to assume that the underlying inter-sector business relationships captured in the model have not changed in the years since the model was estimated. Given the pace of technological change in the last 15 years, this assumption could be challenged, but it is necessary in order to have any estimate of indirect impacts. There is no available model based on more recent data concerning the structure of the

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<sup>2</sup> Chase, Robert A., Philip Bourque, and Richard S. Conway. *The 1987 Washington State Input-Output Study*. Report for Washington State Office of Financial Management, by Graduate School of Business, University of Washington, Seattle, September 1993; in addition a special study of the biotechnology and medical device industry was consulted for multiplier impacts of the biotechnology industry; see Chase, Robert A., *Biotechnology and medical device industry in Washington State: An economic analysis*, report by Huckell/Weinman Associates, Inc., for Washington Biotechnology & Biomedical Association, December 2002.

economy. The degree of potential error in the indirect and total impact estimates is therefore higher than for the direct impacts.

Second, a key issue is how much of the indirect impact will occur within the City of Seattle itself. The model estimates statewide impacts, and then apportions impacts to Seattle based on the city's industry by industry shares of statewide employment. A large portion of the impact comes through purchases from the services sectors by either businesses or consumers. Neither business nor consumers typically reach far beyond their local marketplace to find service providers except in the special case of services delivered over the Internet (e.g., customer service is increasingly provided for businesses by distant companies).

Since there are no published data on the geographic distribution of services purchases by Seattle businesses and residents, a sensitivity analysis approach is taken in this report. The results that are based on simple employment shares are reported, and serve as a lower bound estimate of indirect impact. These low-end estimates are doubled on the assumption that a higher proportion of services are purchased from local suppliers. This higher estimate provides a high end, but still reasonably conservative estimate of indirect impact. It is conservative in that one could argue that essentially all service purchases by Seattle businesses and consumers will go to local firms.

Current tax rates are then applied to estimated employment levels from each of these two indirect impact scenarios. The resulting tax revenue estimates are presented below for the low and high scenario Phase I and Phase II total impacts, which include the direct, and indirect, economic activity.

## ***Assumptions***

### **Commercial and Residential Development**

The first set of projects in the South Lake Union area announced by property owners (Phase I) will provide space for University of Washington research laboratories, other research institutions desiring expansion space, commercial biotech companies, an architectural design company, office space for other tenants, and a number of residential units. Some of these projects are in the planning phases or have permit applications in with the city – others are under construction. The buildings will be completed and enter service by 2007, including several as early as 2004. They will add over 3 million square feet of commercial and residential space to the area.

Sometime after the completion of these projects, a second phase of development is expected to begin in the South Lake Union area (Phase II). The projected build-out of Phase II (with the existing Phase I buildings) will total a net increase of 7.2 million square feet of commercial space, 35 percent of which is assumed to be designed for biotechnology research and development uses, with the remainder in a mix of commercial office (39%) and retail uses (26%).

In addition to the commercial development, 10,000 residential units are projected to be constructed in the South Lake Union area through the development of 7.7 million square feet of new housing units. Estimates for both commercial and residential development are clearly speculative for Phase II, but they are based on the best information currently available.

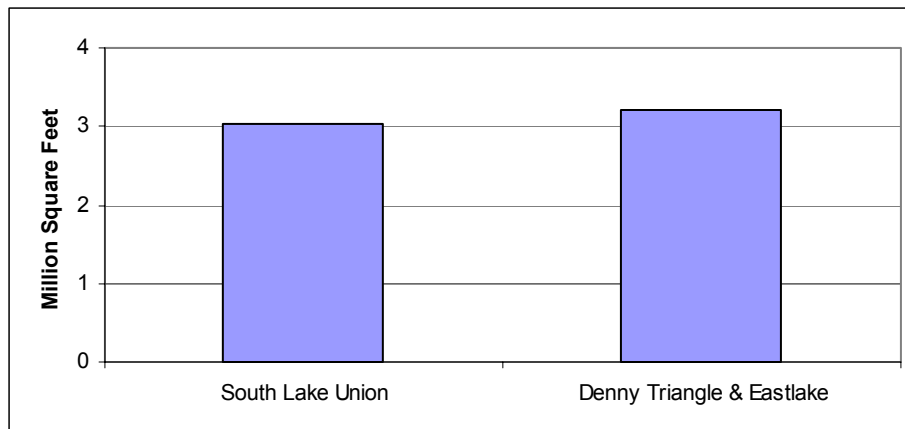
The table below shows the estimated new development in Phase I and Phase II.

Estimated Net New Additions to Developed Space in South Lake Union Neighborhood by Phase  
(million square feet – net new)

Industry/Use	Phase I (2000-2007)	Phase II (2008-2020)	Total (2000-2020)
Biotech	1.382	1.138	2.520
Office	0.708	2.100	2.808
Retail & hotel	0.120	1.752	1.872
<b>Commercial Sub-Total</b>	<b>2.210</b>	<b>4.990</b>	<b>7.200</b>
Residential	.833	6.830	7.663
<b>Total square feet</b>	<b>3.043</b>	<b>11.820</b>	<b>14.863</b>

This is a quite substantial addition to laboratory and office space in Seattle, but to put developments in this neighborhood in context, note that the Denny Triangle and the area along Eastlake just north of the boundaries of South Lake Union are also experiencing significant development. The following figure shows the square footage in projects underway or in the permitting process in South Lake Union and in nearby areas (Denny Triangle and along Eastlake north of E. Nelson). A total of 3 million square feet of commercial and residential space is under development in South Lake Union, but the total for the Denny Triangle and the area along Eastlake north of the South Lake Union boundary is approximately 3.2 million square feet.

Projected Development Near South Lake Union, 2000-07



Other key assumptions were derived from development companies and prior studies of the South Lake Union area. These assumptions include:

- Average assessment value of biotechnology research space--\$251 per square foot
- Average assessment value of commercial space--\$201 per square foot
- Average assessment value of residential space--\$100 per square foot
- Residential units will average--750 square feet
- Land costs represent 15% of total development costs. This 15% is not subject to the sales tax on construction.
- Phase II development will be completed in even annual increments and will enter service (and enter the tax base) from 2008 to 2020.
- Future inflation rates are unknown and the analysis is conducted in 2005 dollars, with a real discount rate of 3% used to discount future benefits; this discount rate reflects the long term growth potential of the economy<sup>3</sup>.
- Tax rates and utility fees will not change and therefore current yields per square foot or per employee in comparable space can be used to estimate the City's future tax and fee revenues.<sup>4</sup>
- For a mix of biotech, commercial office, and retail, an average of 3.29 employees will occupy each 1,000 square feet of space as assumed by Heartland in their 2002 study of the South Lake Union area.
- With 35% of the 7.2 million square feet of development assumed to be biotech research and development space, the remainder will be 39% office and 26% retail space; these assumptions reflect the pattern established in Phase I to some degree and are consistent with the Puget Sound Regional Council's long range projections for the area and surrounding neighborhoods.

Any of these assumptions could be easily modified by analysts who wish to consider alternative scenarios for future development of the South Lake Union region. The value of this study is in setting up an analytic framework that can be used in sensitivity studies to explore the implications of alternative assumptions, or to assess the impact of changing development patterns as market conditions unfold over the next 17 years.

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<sup>3</sup> City financial policies call for the use of a discount rate that approximates the inflation-adjusted marginal pre-tax rate of return on an average investment in the private sector. The local economy has historically grown faster than the nation in recent decades, and it may tend to do so once the current recessionary period ends. Also, the long term growth rate of the national economy may have increased from a historical trend rate as a consequence of new technology and higher productivity growth rates as seen in the late 1990s.

<sup>4</sup> Data from City of Seattle Finance Dept. and *Commons/South Lake Union development fiscal impact analysis*, report for the City of Seattle Office of Management & Budget by Gibson Economics Inc., November 1994.

## Employment

Employment in biotechnology research, business services offices, and retail establishments located in new buildings within the South Lake Union region is projected to increase by 6,409 as a consequence of the first phase of development from the present to 2007. By 2020, employment within future new facilities in this area is projected to increase to a total of 23,710. These employment growth estimates reflect only direct impacts. Indirect impacts and associated employment are discussed later.

### Job Creation Estimates for New South Lake Union Buildings

Industry	2000-07	2008-20	Total, 2020
Biotech	3,159	3,141	6,300
Office (Business Services, Financial, Real Estate)	2,518	7,928	10,446
Retail	<u>732</u>	<u>6,232</u>	<u>6,964</u>
Total	6,409	17,301	23,710

## *Phase I and Phase II Direct Impacts*

Fiscal impacts are estimated using current tax rates. Estimates are run out to the year 2025. The City of Seattle relies on revenues from property, business and occupation, sales, and utility taxes.

Other levels of government also impose taxes of these types. Only the state, in addition to the city, receives revenue from B&O and utility taxes, but many local government units receive a share of the sales and property tax receipts.

The estimates below show the projected City of Seattle revenues, and statewide receipts.

## Property Taxes

New development increases property tax collections, and will increase revenue to public jurisdictions. The Washington State legislature has established various specific exemptions from the property tax for specific activities (independent of property ownership). These include, for example, nonprofit cancer research – Fred Hutchinson receives this exemption – and nonprofit hospitals under some conditions. General biotech research or clinic facilities, even if undertaken by nonprofits, are not eligible. Possible exemptions have been considered in these projections.

State and local government may see a cumulative net present value total of \$185 million in increased property tax revenues by 2025 due to current and projected South Lake Union development. Of this cumulative total, the City is projected to receive \$65.8 million (net present value).

The Phase I projects are already underway, making the property tax receipts from this phase of development more certain than those that may accrue later as Phase II proceeds. By 2007, the net present value of the property tax receipts from the Phase I projects is projected at \$11.7 million statewide, of which \$4.2 million would go to the City of Seattle.

By 2025, these Phase I properties alone will yield a net present value of \$83.9 million statewide and \$31.6 million for the City of Seattle in property tax revenues.

**Property Tax Revenues**  
(net present value, 2005-2025 in millions of dollars)

<b>Tax</b>	<b>City of Seattle</b>		<b>Statewide</b>	
	Phase I	Phase I and Phase II	Phase I	Phase I and Phase II
Property	\$31.6	\$65.8	\$83.9	\$185.1

**B&O Tax**

The business and occupation tax is levied on the gross receipts of businesses, with differing rates depending on the industry classification of each business. Various credits applicable to high technology businesses makes it possible that no significant B&O revenues will come from biotechnology companies located in South Lake Union.

The tax revenue estimates below assume no B&O revenue from biotechnology companies. However, the retail, service, and financial sector businesses that move into South Lake Union will be liable for B&O taxes.

The non-biotech businesses are projected to yield revenues to the City with a net present value of \$1.8 million by 2007, and \$4.9 million statewide. By 2025, the cumulative net present value of B&O revenues due to businesses in new facilities in the South Lake Union region is projected at \$45 million to the City of Seattle and over \$153 million statewide.

The Phase I projects alone should yield city revenues of nearly \$18.2 million in net present value by 2025, and \$129 million statewide.

**B&O Tax Revenues**  
(net present value, 2005-2025 in millions of dollars)

<b>Tax</b>	<b>City of Seattle</b>		<b>Statewide</b>	
	Phase I	Phase I and Phase II	Phase I	Phase I and Phase II
B&O Tax	\$18.2	\$45.2	\$128.6	\$153.1



## Sales Tax

Sales tax revenues will accrue from the projected development in two ways. First, this tax is applied to construction costs, with an exemption applied to laboratory construction and equipment used for research and development.

Sales taxes applicable to construction are applied to non-biotech building cost estimates. Second, retail products sold by any business located in the area will also be subject to the sales tax.

The net present value of the tax yield to the City of Seattle from the construction-related sales taxes is estimated at \$1.6 million in Phase I and \$18.9 million statewide. If Phase II development is spread out in even annual increments, the annual sales tax from construction in the South Lake Union area is projected at \$1.036 million annually from 2008 to 2025 for the City of Seattle and \$10.7 million statewide. By 2025, the projected cumulative net present value of this tax stream is estimated at nearly \$11.9 million for the City of Seattle and over \$123 million statewide.

### Construction Sales Tax Revenues

(net present value, 2005-2025 in millions of dollars)

Tax	City of Seattle		Statewide	
	Phase I	Phase I and Phase II	Phase I	Phase I and Phase II
Construction Sales	\$1.6	\$11.9	\$18.9	\$123.2

Taxable retail sales by businesses located in South Lake Union are projected to add a cumulative net present value of \$26 million statewide by 2025, of which \$2.6 million would accrue to the city.

The Phase I projects alone are projected to provide a cumulative net present value of \$6 million in statewide receipts from retail sales tax by 2025, of which \$575 thousand would come to the city.

### Retail Sales Tax Revenues

(net present value, 2005-2025 in millions of dollars)

Tax	City of Seattle		Statewide	
	Phase I	Phase I and Phase II	Phase I	Phase I and Phase II
Retail Sales	\$0.6	\$2.6	\$6.0	\$26.4

## Utility Taxes

The city and state impose taxes on all utility revenues (water, sewer, telephone, electric, gas, and garbage), whether a private company or the city itself provides the service. These taxes are separate from utility rates, and, in the case of the City, go directly to the General Fund without restriction on their use. The revenues from taxes on public and private utilities can be estimated on a per-square-foot basis for the commercial businesses and residential units projected in the South Lake Union area.

Biotech research laboratories are especially intensive users of electricity, water/ sewer, and garbage services. These differences and their impacts on utility tax revenues have been estimated through data provided by the Fred Hutchinson Cancer Research Center.

By 2007, the cumulative net present value of these revenues is estimated at \$2.6 million, of which the city would receive \$1.7 million. By 2025, the cumulative net present value of these revenues reaches \$57 million statewide, of which the City would receive more than \$34 million.

Phase I projects alone would yield a net present value of \$21.5 million in statewide utility tax revenues by 2025, of which the city would receive \$13 million.

**Utility Tax Revenues**  
(net present value, 2005-2025 in millions of dollars)

Tax	City of Seattle		Statewide	
	Phase I	Phase I and Phase II	Phase I	Phase I and Phase II
Utility	\$13.1	\$34.5	\$21.5	\$57.3

## Summary: Direct Tax Revenue Increases

By 2025, after full build out of the South Lake Union projects, the City of Seattle's annual revenues are projected to be nearly \$16 million higher than if there is no development in the South Lake Union region from now to 2025.

The net present value of the cumulative increase in tax receipts from the South Lake Union region by 2025 is \$160 million. If no development takes place after the Phase I projects are completed, the city will realize over \$65 million in tax revenues in net present value terms by 2025 from the businesses occupying the Phase I projects.

**Projected City of Seattle Direct Tax Yields from South Lake Union Development**

Tax	Annual New Revenue in 2005	Annual New Revenue in 2025	NPV, 2005-2025 Phase I Projects Only	NPV, 2005 to 2025 Phase I & Phase II
Sales Tax on Construction	\$55,739	(no constr.) 0	\$1,565,529	\$11,904,398
Property	860,498	7,135,789	31,572,850	65,751,476
B&O	309,864	4,965,218	18,154,150	45,165,738
Sales Tax, Retail Sales	10,707	271,225	575,321	2,551,720
Utility Taxes	387,806	3,630,278	13,136,256	34,531,838
<b>Total Tax Revenue</b>	<b>\$1,624,614</b>	<b>\$16,002,510</b>	<b>\$65,004,106</b>	<b>\$159,905,170</b>

The comparable totals for tax revenues to Washington public agencies are shown in the following table. The Phase I projects will yield a cumulative total of \$321 million in net present value by 2025. If Phase II build-out occurs as projected, the cumulative net present value of the tax streams due to this development would total \$545 million by 2025.

**Projected Statewide Tax Yields from South Lake Union Development**

Tax	Yield in 2005	Yield in 2025	NPV, 2005-2025 Phase I Projects Only	NPV, 2005 to 2025 Phase I + Phase II
Sales Tax, Construction	\$577,065	0	\$18,871,350	\$123,246,687
Property	1,910,321	20,085,925	83,887,678	185,078,228
B&O	803,861	17,254,362	128,597,034	153,147,321
Sales Tax, Retail Sales	110,850	2,808,000	5,956,320	26,418,055
Utility Taxes	589,263	5,631,203	21,453,599	57,336,609
<b>Total Tax Revenue</b>	<b>\$3,991,360</b>	<b>\$45,779,490</b>	<b>\$258,765,981</b>	<b>\$545,226,900</b>

## ***Phase I and Phase II – Direct and Indirect Impacts***

As discussed above, the direct impacts, particularly of the biotech employment coming into South Lake Union, will have multiplier impacts on the entire regional economy. These multiplier or “indirect” effects, when added to the direct impacts, constitute the total economic impacts of the projected development.

The multiplier impact of the biotechnology industry was studied by Chase in a report for the Washington Biotechnology and Biomedical Association. His estimate is used in this study, while other multiplier impacts are derived from the Washington Input-Output model for services other than financial services and wholesale/retail trade.<sup>5</sup> The input output model used to estimate these impacts allocates part of the statewide impacts to

<sup>5</sup> See sources in footnote 2.

Seattle based on the relative share of Seattle employers in statewide employment of each indirectly impacted industry.

This produces the “low” estimate of total impacts in the following tables. Doubling the services portion of the indirect impact results in the “high” impact estimate as explained in the methodology section above.

## **Employment**

As noted above, development in the South Lake Union area may create 23,710 new jobs. That increase is net of any possible jobs losses that may occur during redevelopment.

The indirect economic impact will also create new jobs, and, based on the assumptions above, statewide employment may expand by an additional 17,314 jobs by 2007, and 39,495 by 2020. Of these statewide totals, Seattle could capture 9,278 to 11,570 new workers by 2007 and 23,140 to 27,806 from 2008 to 2020, for a total of 32,419 to 39,376 jobs.

### **Total Employment Growth Projections**

	Statewide	Seattle- Low Impact	Seattle- High Impact
2000-07	17,314	9,278	11,570
2008-20	39,495	23,140	27,806
Total	56,809	32,419	39,376

## **Indirect and Direct Tax Revenues**

The projected total employment increases will result in additional increases in Seattle’s tax revenues. The following table shows the estimated net present value of direct tax revenues, plus the additional tax revenues stemming from the multiplier impacts of Phase I developments (2005-07) and the combination of Phase I and Phase II developments from 2005 to 2025.

The City of Seattle’s revenues may increase by \$13.5 to over \$18 million in cumulative tax receipts (net present value) in the three years from 2005 to 2007. In the years from 2005 to 2025 the cumulative tax receipts (net present value) are projected to equal \$224 million to nearly \$269. Statewide government revenues may grow by \$143 million by 2007 and \$1.39 billion by 2025.

### **Projected Total Tax Receipts**

#### **Sales Tax on Construction (construction ends 2020)**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
55,064,698	1,668,046	2,709,401	240,296,284	12,749,411	15,405,791

#### **Property Tax**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
23,973,696	5,112,405	6,083,564	484,461,924	93,960,870	107,685,150

#### **B&O**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
24,860,376	3,760,139	5,348,246	452,029,810	72,926,799	95,104,758

#### **Utility Taxes**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
5,646,516	2,092,935	2,427,857	110,505,026	40,386,485	45,063,689

#### **Retail Sales**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
31,741,349	837,974	1,473,494	106,265,027	4,580,963	6,202,100

#### **Total Additional Tax Receipts**

Net Present Value, Taxes Received from 2005 to 2007			Net Present Value, Taxes Received from 2005 to 2025		
Statewide	Seattle-Low	Seattle-High	Statewide	Seattle-Low	Seattle-High
141,286,635	13,471,499	18,042,563	1,393,558,071	224,604,529	269,461,487

### *Conclusions*

Development underway, and the additional development projected for the South Lake Union area, has the potential to substantially increase the employment base in the City of

Seattle by 32,000 to 39,000. At the same time, it can increase City tax receipts by \$224 to \$269 million, in net present value terms, by 2025.

Much of the first phase of this anticipated development is underway or in the permit phase. This first phase of development is projected to bring 9.3 to 11.6 thousand new jobs to the City, along with a net present value of \$13.5 to \$18 million in tax receipts in the three years from 2005 to 2007.

The outcomes from 2008 to 2025 will depend on how rapidly the commercial biotech sector and other kinds of businesses are willing to lease space in the South Lake Union region, given the pace of growth in the biotechnology industry as well as the competition with other locations in the urban area that would like to attract new employers.

Clearly, another critical factor will be the level of infrastructure supporting the increased commercial and residential density, including open space, transit and pedestrian options, traffic impacts and other considerations.